

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a system including a wireless device, a network device, and a notification server, wherein the notification server is configured to sends notifications to other computer systems when data objects of interest to the other computer systems change in a corresponding data store~~the wireless device over a low capacity channel~~, the wireless device configured to communicate with the notification server over a first communication channel and configured to connect to the network device, the network device configured to communicate with the notification server over a second communication channel comprising the internet, the first communication channel having higher availability and lower bandwidth relative to the second communication channel, a method for the notification server to deliver route~~the~~ notifications over a high capacity channel whenever a high capacity channel is available to the wireless device to update the wireless device about changes to data objects in the corresponding data store, the method comprising ~~the wireless device~~ performing:

an act of communicating with the wireless device over a low capacity ~~the first~~ communication channel, the communication indicative of ~~and over which~~ notifications for are by default sent from the notification server to the wireless device being routable over the first communication channel;

an act of receiving ~~from the wireless device, via the low capacity channel, an address of a~~ subsequent communication through the network device, the subsequent communication notifying the notification server that the wireless device has access to the second communication channel~~connected to a high capacity channel comprising the internet~~, the subsequent communication including a network device address for the network device sent from the wireless device over the low capacity channel to indicate to the notification server ~~that the wireless device has connected with the network device such that notifications for the wireless device are to be also routed~~ routable to the address of the network device address over the high second communication capacity channel comprising the internet;

an act of receiving notice ~~that the wireless device has access to the high capacity channel comprising the internet through the network device~~;

an act of accessing a notification indicative of a change to a data object in the corresponding data store, the notification accessed after receiving the subsequent communication through the network device, the notification for delivery to the wireless device;

an act of automatically determining an appropriate communication channel, from among the first and second communication channels, over which to route the notification to the wireless device, the determination based on the size of the notification and the current availability of the first and second communication channels;

an act of routing the notification over the appropriate communication channel for delivery to the wireless device in response to determining the appropriate communication channel based on the size of the notification and the current availability of the first and second communication channels.

~~an act of temporarily rerouting notifications that are to be sent to the wireless device over the low capacity channel to now be sent to the wireless device over the high capacity channel comprising the internet and until it is at a later time determined that the wireless device no longer has access to the high capacity channel and at which later time notifications will resume being sent to the wireless device over the low capacity channel, wherein the high capacity channel has an availability that is less than an availability of the low capacity channel and wherein the temporarily rerouting notifications occurs whenever the high capacity channel is available to the wireless device.~~

2. (Previously Presented) A method as defined in claim 1, wherein the wireless device communicates with the network device over a communication link, and wherein the wireless device automatically connects with the network device.

3. (Original) A method as defined in claim 2, wherein the network device is one of a desktop computer, a blue tooth enabled LAN, and a kiosk.

4. (Original) A method as defined in claim 2, wherein the communication link is one of a serial link, a universal serial bus link, a wireless Bluetooth link and an infrared link.

Claims 5 – 7 . (Cancelled).

8. (Currently Amended) A method as defined in claim 1, further comprising an act of detecting that the wireless device no longer has access to the ~~high-capacity~~ second communication channel.

9. (Currently Amended) A method as defined in claim 8, wherein the act of detecting that the wireless device no longer has access to the ~~high-capacity~~ second communication channel further comprises an act of sending an acknowledgement to the notification server for each notification received by the wireless device.

10. (Currently Amended) A method as defined in claim 8, wherein the act of detecting that the wireless device no longer has access further comprises the act of notifying the notification server over the ~~low-capacity~~ first communication channel that notifications can no longer be sent over the ~~high-capacity~~ second communication channel.

11. (Original) A computer program product having computer executable instructions for performing the acts recited in claim 1.

12. (Currently Amended) In a system including a wireless device, a network device, and a notification server, wherein the wireless device and the notification server t is configured to send notifications to other computer systems when data objects of interest to the other computer systems change in a corresponding data store, the wireless device configured to communicate with the notification server over a first communication channel and configured to connect to the network device, the network device configured to communicate with the notification server over a second communication channel comprising the internet, the first communication channel having higher availability and lower bandwidth relative to the second communication channel ~~communicate over a low capacity channel~~, a method ~~for the wireless device and the notification server~~ network device to deliver notifications to the wireless device to update the wireless device about changes to data objects in the corresponding data store ~~communicate over a high capacity channel~~, the method comprising steps for:

an act of communicating with the wireless device over the low-capacity first communication channel, the communication indicative and over which notifications for are by default sent from the notification server to the wireless device being routable over the first communication channel;

wherein the notification server subsequently receives information from the wireless device over the low-capacity first channel indicating that notifications for the wireless device are to be routed over the second communication channel, the received information to a network address on a high capacity channel comprising the internet connected to indicate to the notification server that notifications for the wireless device are also routable to the network device over the second communication channel;

a step for establishing communication over the high-capacity second communication channel between the wireless device and the notification server;

an act of accessing a notification indicative of a change to a data object in the corresponding data store, the notification accessed after receiving the subsequent communication, the notification for delivery to the wireless device;

an act of automatically determining an appropriate communication channel, from among the first and second communication channels, over which to route the notification to the wireless device, the determination based on the size of the notification and the current availability of the first and second communication channels; and

a step for temporarily sending the notifications over the high-capacity second communication channel comprising the internet instead of the default low-capacity first communication channel in response to receiving the information from the wireless device over the low-capacity first communication channel; and

~~— a step for, detecting that the wireless device is no longer connected with the high capacity channel comprising the internet, and in response to detecting that the wireless device is no longer connected with the high capacity channel, resuming to send notifications over the low capacity channel, wherein the high capacity channel has an availability that is less than an availability of the low capacity channel and wherein the temporarily rerouting notifications occurs whenever the high capacity channel is available to the wireless device.~~

13. (Currently Amended) A method as defined in claim 12, wherein the step for ~~accessing the high-capacity~~ establishing communication of the second communication channel further comprises:

an act for connecting the wireless device with a network device corresponding to a network address that is included in the information received at the notification server, wherein the network device has an existing access to the ~~high-capacity~~ second communication channel; and

an act of detecting the ~~high-capacity~~ second communication channel by the wireless device.

14. (Currently Amended) A method as defined in claim 12, wherein the act of establishing communication over the ~~high-capacity~~ second communication channel further comprises:

an act of formatting the notifications for transmission over the ~~high-capacity~~ second communication channel.

15. (Currently Amended) A method as defined in claim 12, further comprising a step for determining that the wireless device can no longer receive notifications over the ~~high capacity~~ second communication channel.

16. (Currently Amended) A method as defined in claim 15, wherein the step for determining that the wireless device can no longer receive notifications over the ~~high capacity~~ second communication channel comprises:

an act of sending an acknowledgement by the wireless device for each notification sent by the notification server; and

an act of determining that the wireless device no longer has access to the ~~high capacity~~ second communication channel if the notification server does not receive a particular acknowledgement for a particular notification within a predetermined time period.

17. (Currently Amended) A method as defined in claim 12, further comprising a step for resuming the step for sending notifications over the ~~high capacity~~ second communication channel when the wireless device again has access to the ~~high capacity~~ second communication channel.

18. (Currently Amended) A method as defined in claim 12, further comprising a step for preparing the notification for transmission over the ~~high capacity~~ second communication channel when the wireless device has access to the ~~high capacity~~ second communication channel.

19. (Currently Amended) A method as defined in claim 12, further comprising a step for preparing the notification for transmission over the ~~low capacity~~ first communication channel when the wireless device does not have access to the ~~high capacity~~ second communication channel.

20. (Original) A computer program product having computer executable instructions for performing the steps recited in claim 12.

21. (Currently Amended) A method as recited in claim 12, the method further comprising:

an act of providing the wireless device with access to the ~~high-capacity~~ second communication channel through a network device connected to the ~~high-capacity~~ second communication channel when the wireless device is in communication with the network device;

an act of contacting a proxy server over the ~~high-capacity~~ second communication channel to notify the proxy server that the wireless device has access to the ~~high-capacity~~ second communication channel; and

an act of receiving notifications from the notification server over the ~~high-capacity~~ second communication channel until the wireless device no longer has access to the ~~high-capacity~~ second communication channel, wherein the notification are re-routed by the proxy server over the ~~high-capacity~~ second communication channel.

22. (Currently Amended) A method as defined in claim 21, further comprising an act of receiving notifications over the ~~low-capacity~~ first communication channel when the ~~high-capacity~~ second communication channel is not available to the wireless device.

23. (Currently Amended) A method as defined in claim 21, wherein the act of providing the wireless device with access to the ~~high-capacity~~ second communication channel further comprises an act of connecting the wireless device at a docking station, the docking station having a communication link with the network device that provides the wireless device with access to the ~~high-capacity~~ second communication channel through the network device.

24. (Currently Amended) A method as defined in claim 21, further comprising an act of sending notifications over the ~~low-capacity~~ first communication channel when the wireless devices loses access to the ~~high-capacity~~ second communication channel.

25. (Currently Amended) A method as recited in claim 12, the method further comprising:

an act of a proxy server receiving an access notification from the wireless device, wherein the access notification informs the proxy server that the wireless device has access to the ~~high-capacity~~ second communication channel;

an act of the proxy server routing the notification to the wireless device over the ~~high-capacity~~ second communication channel instead of the ~~low-capacity~~ first communication channel; and

an act of the proxy server resuming sending the notification to the wireless device over the ~~low-capacity~~ first communication channel when the wireless device no longer has access to the ~~high-capacity~~ second communication channel.

26. (Currently Amended) A method as defined in claim 25, wherein the act of the proxy server routing the notification further comprises an act of formatting the notification for transmission over the ~~high-capacity~~ second communication channel.

27. (Currently Amended) A method as defined in claim 25, wherein the act of detecting the ~~high-capacity~~ second communication channel further comprises an act of connecting the wireless device with the ~~high-capacity~~ second communication network over a communication link.

28. (Previously Presented) A method as defined in claim 27, wherein the communication link is provided by the network device, the communication link being one of: a serial link, a universal serial bus link, a wireless Bluetooth link, and an infrared link.

29. (Currently Amended) A method as defined in claim 25, further comprising an act of the proxy server determining that the wireless device no longer has access to the ~~high-capacity~~ second communication channel.

30. (Currently Amended) A method as defined in claim 29, wherein the act of the proxy server determining that the wireless device no longer has access further comprises:

an act of implementing a timeout for the notification sent to the wireless device;
and

an act of resuming sending the notification to the wireless device over the ~~low~~
~~capacity~~ first communication channel if an acknowledgement of the notification is not
received by the proxy server before the timeout expires.

31. (Previously Presented) A computer program product comprising a physical computer readable medium having stored thereon computer executable instructions for performing the method of claim 25.

32. (Currently Amended) A computer program product as recited in claim 31, wherein the method further comprises:

detecting the ~~high-capacity~~ second communication channel by the wireless device, wherein the wireless device has access to the ~~high-capacity~~ second communication channel through the network device;

notifying the notification server that the wireless device can receive notifications over the ~~high-capacity~~ second communication channel; and

sending notifications over the ~~high-capacity~~ second communication channel, wherein the network device forwards the notifications to the wireless device.

33. (Currently Amended) A computer program product as defined in claim 32, wherein the method further comprises:

an act of detecting that the wireless device no longer has access to the ~~high capacity~~ second communication channel; and

an act of sending notifications over the ~~low-capacity~~ first communication channel when the ~~high-capacity~~ second communication channel is unavailable to the wireless device.

34. (Currently Amended) A computer program product as defined in claim 32, wherein the method further comprises:

an act of the wireless device sending an acknowledgement to the notification server for each notification received by the wireless device; and

an act of the notification server determining that the wireless device no longer has access to the ~~high-capacity~~ second communication channel if a particular acknowledgement for a particular notification is not received in a time period.

35. (Currently Amended) A computer program product as defined in claim 32, wherein the method further comprises:

an act of formatting the notification for transmission over the ~~low-capacity~~ first communication channel if the ~~high-capacity~~ second communication channel is unavailable; and

an act of formatting the notification for transmission over the ~~high-capacity~~ second communication channel when the wireless device has access to the ~~high-capacity~~ second communication channel.

36. (Original) A computer program product as defined in claim 32, wherein the method further comprises an act of docking the wireless device with the network device.

37. (Currently Amended) A method as recited in claim 1, wherein it is more costly to use the ~~low-capacity~~ first communication channel than the ~~high-capacity~~ second communication channel.

38. (Currently Amended) A method as recited in claim 1, wherein the ~~low-capacity~~ first communication channel is substantially always available for notifications to be sent to the wireless device.

39. (Currently Amended) A method as recited in claim 1, wherein the notification server is external to the infrastructure of the ~~low-capacity~~ first communication channel and external to the infrastructure ~~high-capacity~~ of the second communication channel and wherein the notification server is further configured to send application data notifications to the wireless device over the infrastructure of the ~~low-capacity~~ first communication channel and the infrastructure ~~high-capacity~~ of the second communication channel when the notification server is

notified how to communicate with the wireless device over the infrastructure of the ~~low-capacity~~
first communication channel or over the infrastructure ~~high-capacity~~ of the second
communication channel.